East San Joaquin
WATER QUALITY COALITION
1201 L Street Modesto, CA 95354
www.esjcoalition.org

December 28, 2011

Ms. Pamela Creedon
Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6114

Re: ESJWQC rotating Assessment Monitoring locations in Zone 2

Dear Ms. Creedon,

The East San Joaquin Water Quality Coalition (ESJWQC or Coalition) is requesting to remove the monitoring site Yori Grove Drain @ East Taylor Rd from the Coalition's monitoring program and replace this monitoring location with Levee Drain @ Carpenter Rd. This request is based on 1) the actual monitoring site is located on Turlock Irrigation District (TID) Lateral #3, 2) TID Lateral #3 receives drainage all year from various cities including Ceres, Keyes, Denair, and Turlock and any toxicity or chemicals present in the water cannot be attributed to irrigated agriculture and 3) Levee Drain @ Carpenter Rd is more representative of the irrigated agriculture drainage of the area. These points are expanded below.

Location of Monitoring Site

In 2008, as part of its Monitoring and Reporting Program Plan (MRPP, approved on September 15, 2008) the Coalition developed a list of monitoring sites at which water would be sampled over the next several years. Coalition monitoring is stratified based on zones with one Core Monitoring location and several Assessment Monitoring locations present in each zone. Sites rotate into Assessment Monitoring within each zone (Zone 2 in this case) and after two years the assessment site is rotated to another location.

Yori Grove Drain @ East Taylor Rd (target location: N 37.53690, W -120.98346, actual underground location: N 37.53512, W -120.98425) was scheduled for monitoring in 2011-13 and was scouted by sampling crews at the beginning of 2011 prior to monitoring. When the monitoring team scouted Yori Grove Drain, they selected the exact location they believed was Yori Grove Drain based on the GPS coordinates and visible water. They did not realize that Yori Grove Drain ran underground and therefore selected the only visible waterbody at this location which was in fact TID Lateral #3 (N 37.53673, W -120.98410).

In 2011, the site was monitored for 12 months during which time water column toxicity to *Selenastrum capricornutum* and sediment toxicity to *Hyalella azteca* were detected along with a very slight elevation of pH above the water quality objective. The site was dry three times in 2011 during the months of January, February and December. At a recent meeting with the Coalition Board of Directors, TID informed the Coalition that the monitoring location was TID Lateral #3 and not Yori Grove Drain. Careful inspection of the monitoring site revealed that Yori Grove Drain is a small pipe which enters Lateral #3 downstream of the monitoring location. The last hundred meters of Yori Grove Drain is a buried pipe and the closest available open section is located behind a

locked gate (Figure 1). Discharge from the drain occurs only when there is significant water in the channel and it is then pumped into TID Lateral #3. Very rarely does the pump turn on to pump water into TID Lateral #3 and water from the drain was not being pumped into Lateral #3 when the site was scouted. Therefore, the Coalition has been monitoring TID Lateral #3 which drains a large area of urban and agricultural land to the east of the sampling location. Yori Grove Drain is a small watershed with a limited drainage area that is all agriculture (Figure 2). Although the samplers monitored near Yori Grove Drain, the water they sampled in Lateral #3 represents very different land uses.

Figure 1. Monitoring location on TID Lateral #3 in relation to Yori Grove Drain.

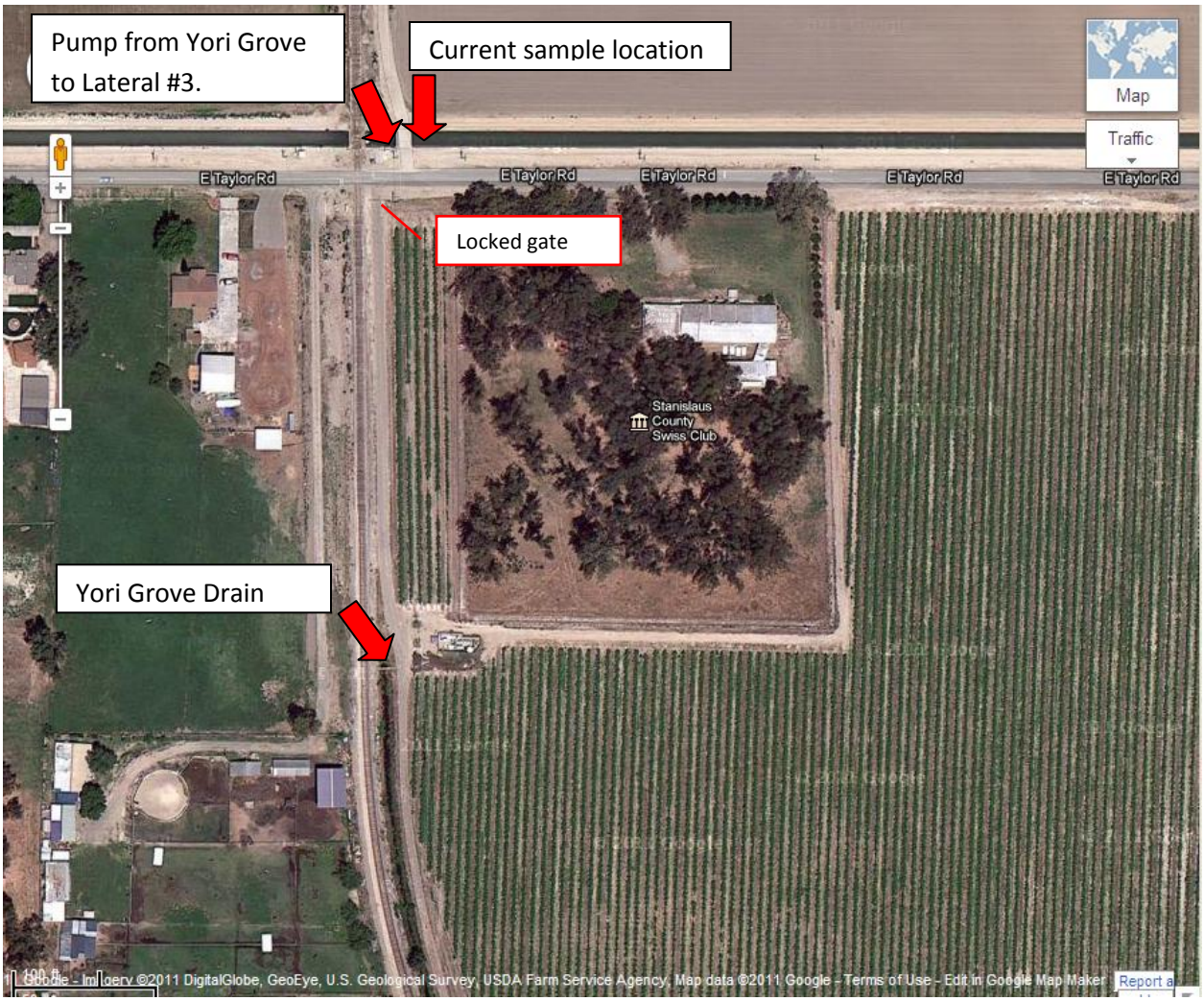

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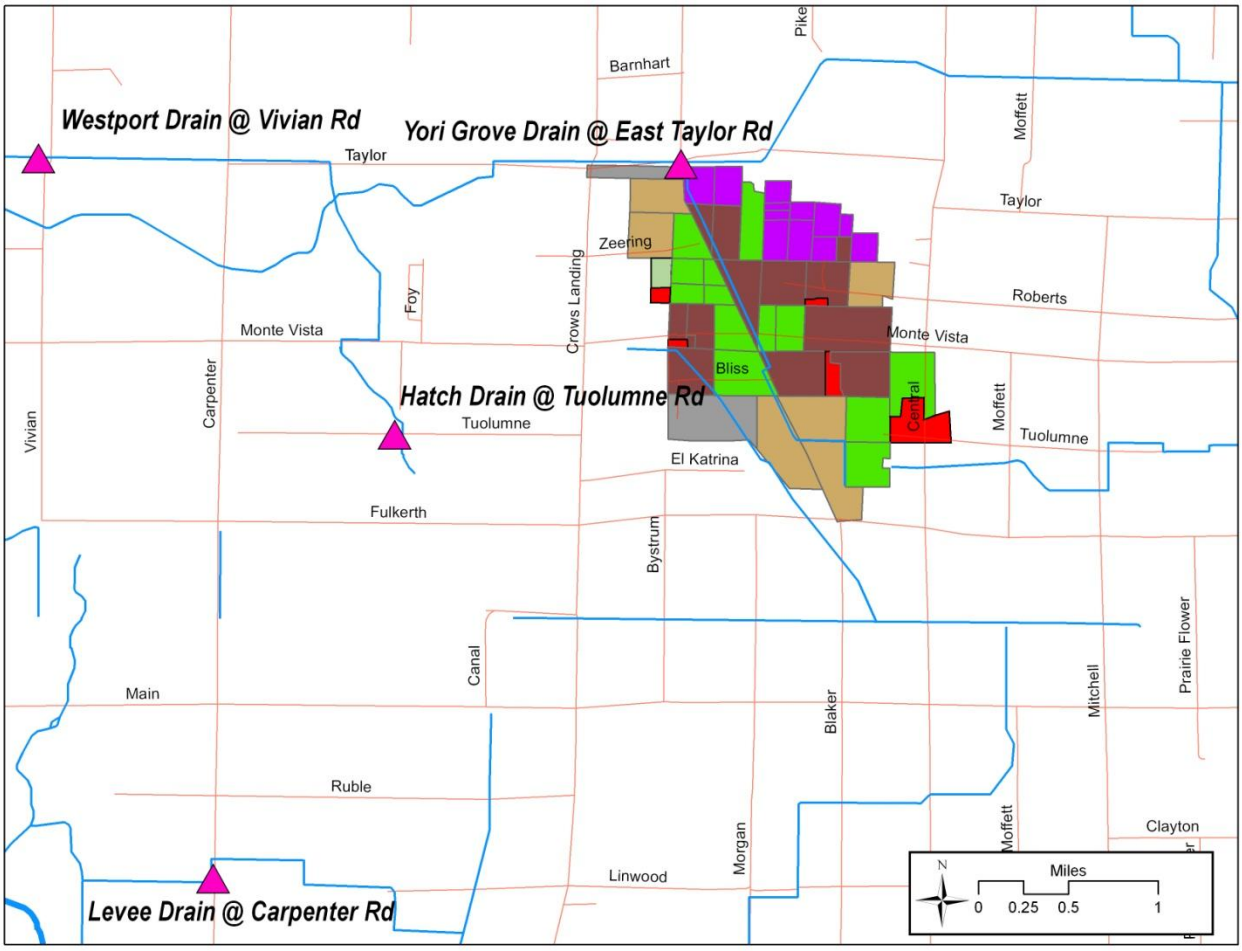
Figure 2. Yori Grove Drain @ East Taylor Rd site subwatershed map. Lateral #3 runs along East Taylor Rd from east to west.



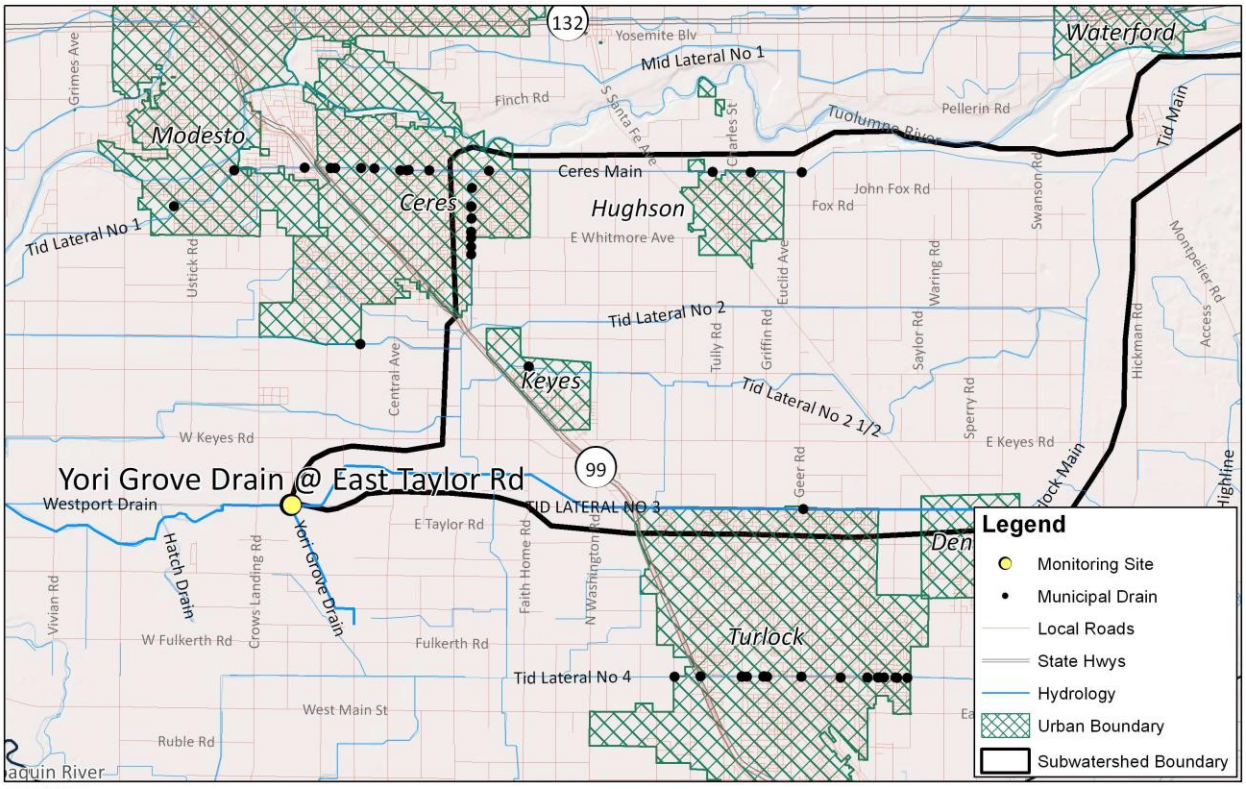
TID Lateral #3 Watershed

The Coalition's monitoring program is based on sampling at locations with upstream agriculture and minimal or no urban influence. Identifying sources of chemicals themselves or chemicals potentially responsible for toxicity is done by examining pesticide use reports for recent applications by agricultural operations upstream of the monitoring location. TID Lateral #3 originates from the Turlock Main Canal and distributes irrigation water to a portion of the TID service area. TID Lateral #3 receives drainage from several small drains and from storm water systems that drain the towns of Ceres, Keyes, Turlock, and Denair. Drainage from Ceres and Keyes arrives at TID Lateral #3 via the Ceres Main Drain and Turlock and Denair direct water from their storm water systems directly to TID #3 (Figures 3, 4, 5). Although the Ceres Main Drain can direct flows past TID #3 and TID #4 to eventually reach the Harding Drain, TID operations can direct flows down TID #2, TID #2 ½, TID #3, or TID #4 depending on volume. Unfortunately, TID does not closely monitor where or when the flows are directed to various laterals making the delineation of upstream watersheds very difficult if not impossible.

The current water quality problems in TID Lateral #3 (previously reported as Yori Grove Drain @ East Taylor Rd) are *Selenastrum* water column toxicity, pH, and *Hyalella* sediment toxicity (88% of control survival). *Selenastrum*

toxicity could be the result of metals and/or herbicides, both of which are common in urban areas. Consequently, it is impossible to identify the urban and/or agricultural sources of constituents that have caused the toxicity to algae. The single sediment sample that was considered toxic based on a statistically significant difference between the sample sediment and the control sediment *Hyalella* had 88% survival compared to the control and is not considered ecologically significant. It was the only time that toxicity occurred at this location (sampled twice in 2011).

Figure 3. Drainage entering TID Lateral #3 from Turlock and Ceres Main Drain. Sampling location is called Yori Grove Drain @ East Taylor Rd however the waterbody sampled was actually TID Lateral #3.

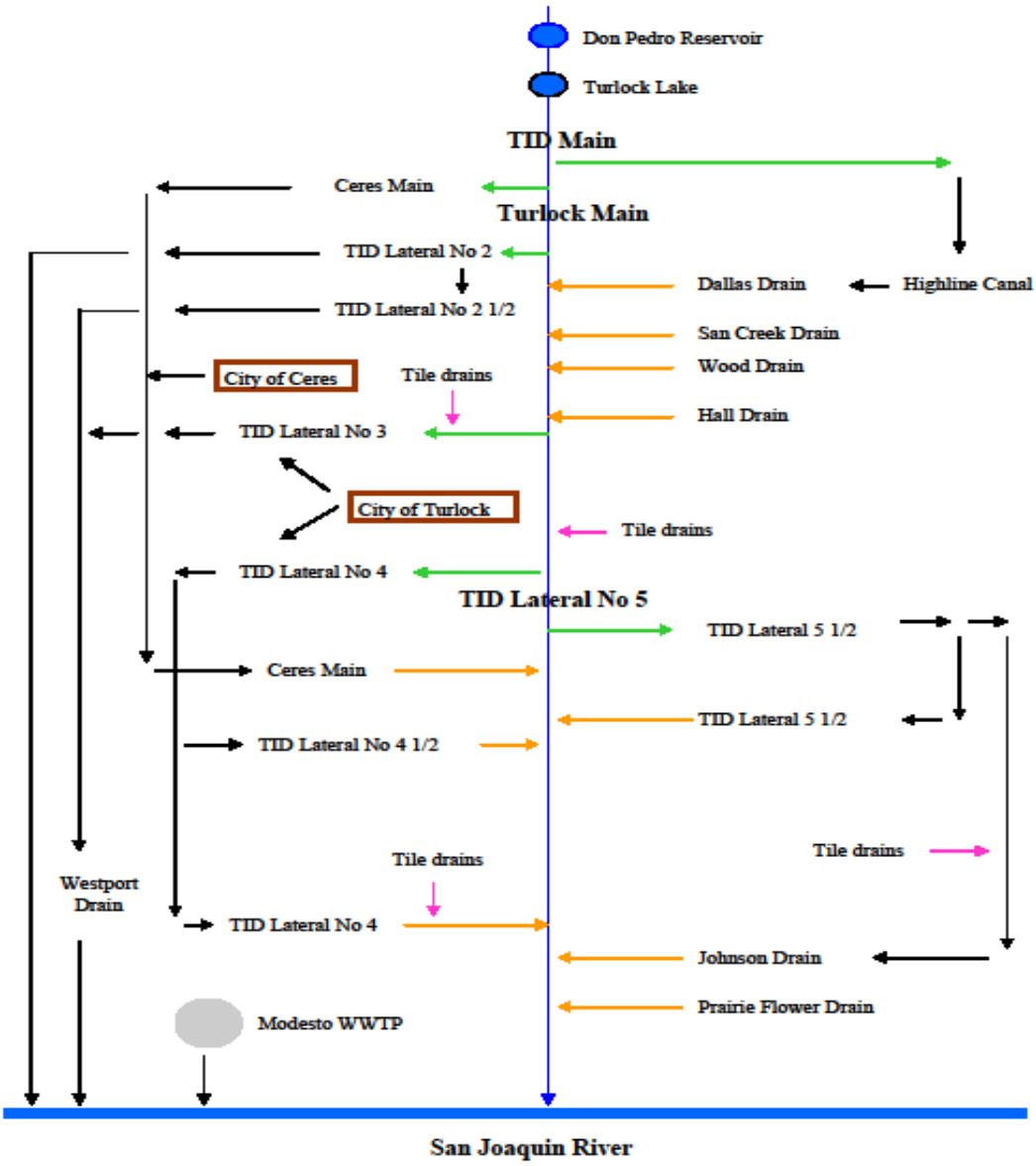


Source of Layers:
Hydrology - NHD hydrodata, 1:24,000-scale, http://nhd.usgs.gov/
Roads, highways, railroads, county boundary, city outlines - California Spatial Information Library.
TRS - Teale Public Land Survey System, Pub. date. 20090101, California Spatial Information Library.
Parcel Layer - Stanislaus 2010, Merced 2011, Madera 2011
Basemap, Shaded Relief - ESRI
GSC North America 1983

Date Prepared: 12/05/11
ESJWQC

Yori Grove @ East Taylor Rd Updated Subwatershed Boundary

Figure 4. Schematic of drainage in the vicinity of TID Lateral #3.



Schematic diagram of major tributaries and diversions (agricultural and flood control) for Harding Drain

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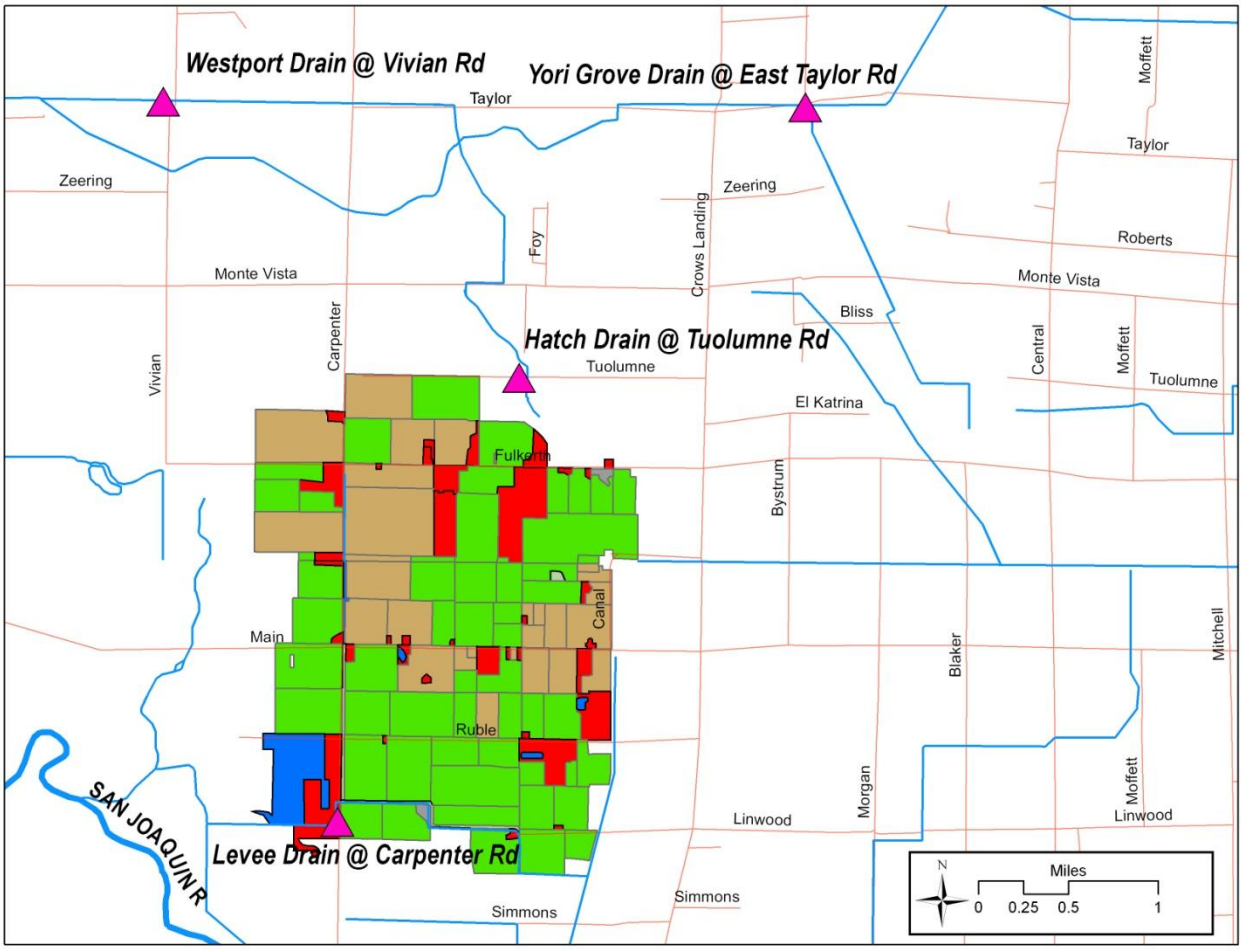
Replace the current monitoring location with Levee Drain @ Carpenter Rd

To better allow a focus on irrigated agriculture, the Coalition is requesting that the current monitoring location called Yori Grove Drain @ East Taylor Rd (actual monitoring location TID Lateral #3, be removed from the ESJWQC monitoring plan and that the Coalition replace this monitoring location with the next location on the 2008 MRPP monitoring site list, Levee Drain @ Carpenter Rd (target location: N 37.47903, W -121.03012, actual sample location: N37.48057, W -121.03109).

Levee Drain is a small water body located to the south and west of the TID #3 monitoring location (Figure 5). It receives drainage from tile drains in a small watershed and could also receive water from Lower Lateral #4. The Lower Lateral #4 spill site is located a short distance away between Palmbrook Road and Rubble Road and water can enter either Levee Drain or continue farther south to the Harding Drain, again depending on flows in each drain. However, primary flows are from the immediate vicinity. Levee Drain discharges directly to the San Joaquin River and Carpenter Road is the farthest west point that the drain can be sampled prior to discharging to the San Joaquin River.

The Coalition has recently scouted this monitoring location with TID representatives and it is agreed that the monitoring location Levee Drain @ Carpenter Rd is representative of the agriculture in the area and would be an appropriate replacement for the Yori Grove monitoring location. The Coalition would like to begin monitoring at this location in January 2012.

Figure 5. Levee Drain @ Carpenter Rd subwatershed.



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Summary of Request

In 2011, the Coalition mistakenly monitored TID Lateral #3 instead of Yori Grove Drain. TID Lateral #3 is not an appropriate monitoring location due to the large amount of urban influence. In addition, it has been discovered the Yori Grove Drain is also not an appropriate monitoring location due to issues with access, limited irrigation and storm runoff, and the low number of times a year that water from Yori Grove Drain is pumped into TID Lateral #3. Therefore, the Coalition requests to amend its MRPP monitoring schedule to monitor Levee Drain @ Carpenter Rd (currently schedule for Assessment Monitoring in 2013) from 2012 through 2014 as the assessment location in Zone 2.

Please let me know if you would like additional information to support this request.

Sincerely,

Parry Klassen
Executive Director
East San Joaquin Water Quality Coalition